



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/582,429

06/08/2006

Kug-Jin Yun

51876P1101

4842

8791

7590

01/20/2011

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER

DIEP, NHON THANH

ART UNIT

PAPER NUMBER

2483

MAIL DATE

DELIVERY MODE

01/20/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,429	Applicant(s) YUN ET AL.	
	Examiner Nhon T. Diep	Art Unit 2483	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-6 in the reply filed on 11/04/2010 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al (US 2003/095177), in view of Kim et al (Design and implementation of streaming system, IDS filed 6/8/2006) and Signes (Binary format for scene: IDS filed 10/27/2009) (all cited by the applicants).

4. Yun et al discloses an MPEG-4 processing system for processing, transmitting and displaying 3D (stereoscopic/multiview) video data (Abstract; [0002-0010, 0014]). A source of 3D data is an inherent prerequisite therefor [0058]. Thus, Yun et al meets limitations as claimed in "An apparatus for processing three-dimensional video" and "a three-dimensional video generating means" of claim 1.

5. The system of Yun et al aims at compatibility of the 3D transmission with the existing MPEG-4 system [0057]. Accordingly source 3D data are processed to generate compression-encoded video data [0052; 0058; 0067-0068] while also generating a

Art Unit: 2483

corresponding object description stream and a corresponding scene description stream [0054]. The generated elementary streams [0060-0061], which comprise header information transferred through the ESI in the existing MPEG-4 system [0061], are packetized into a packet stream for storage or transmission [0052; 0064], which meet limitations as claimed “an MPEG-4 control signal generating means (603) for generating (an MPEG-4 control signal comprising) an MPEG-4 object descriptor and a scene descriptor”, “an encoding means (604) for encoding the three-dimensional video signal and the MPEG-4 (control) signal through an MPEG-4 (and) encoding method, and outputting (the encoding result) as an elementary stream (ES)”; “a packetizing means”; and “generating and transmitting the extracted (encoded three-dimensional video data and the) MPEG-4 control signal (as a packet stream comprising the three-dimensional video data formed by a header and a payload) based on the MPEG-4 system standards”.

Moreover, the system of Yun et al, which mainly refers to processing prior to transmission, implies corresponding reverse processing upon reception of the transmitted packet stream. Thus the limitations of “a depacketizing means (621) for receiving the packet stream transmitted from the packetizing means and depacketizing the encoded three-dimensional video data (including a header and a payload)” is an implicit prerequisite of the disclosed decoding [0124]; and it also meets “a decoding means for restoring three-dimensional video from (the encoded three-dimensional video) data (depacketized by) the depacketizing means and a display means (623) for displaying the restored three-dimensional video data” [0049; 0082-0083].

It is noted that Yun et al does not particularly disclose the following features:

- a. storing source video data;
- b. converting the size and color of the source video data;
- c. generating scene descriptors as Binary Format for Scene Descriptors BIFS;
- d. prior to packetizing the stream(s), forming from the stream (s) a (storable) MP4 file; and

- e. prior to packetizing the stream(s), extracting again from the MP4 file the encoded video data and the MPEG-4 control signal.

(a) is an obvious design option of a skilled person in the pertinent art.

(b) is not specific to 3D processing and as such also an obvious design option of a skilled person.

Since, a skilled person routinely attempting to modify the design disclosed in Yun et al would take account of Kim et al, in the same technical field as the application on file. Kim et al (Abstract) discloses generating scene descriptors as BIFS. Signes (section 2) specifically discloses BIFS as scene descriptors for 3D objects. Accordingly, (c) cannot establish an inventive step.

As to (d) and (e), Kim et al (p. 103 paras. 1-2) further teaches forming an MP4 file from object data IOD, object descriptors OD, and BIFS, and splitting the MP4 file to generate packets for a packet stream. Since, the prior art of record includes each element claimed, although not necessarily in a single prior art reference, with only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference. In combination Yun et al and

Art Unit: 2483

Kim et al, each performs the same function as it does separately, therefore, one of ordinary skill in the art could have combined the elements as claimed by known methods, and that in combination, each element merely performs the same function as it does separately. The results of the combination would have been predictable and resulted in modifying the invention of Yun et al by forming an MP4 file from object data IOD, object descriptors OD, and BIFS, and splitting the MP4 file to generate packets for a packet stream as taught by Kim et al. Doing so would help to simplify the decoding process.

Regarding to claim 2: Claim 2 merely repeats subject-matter already identified in claim 1.

Regarding to claim 3: Claim 3 specifies contents of the MPEG-4 object descriptor which are disclosed by Yun et al [0049, 0077-0084, Figs. 12, 13].

Regarding to claim 4: Claim 4 recites “wherein the MPEG-4 control signal generating means generates the MPEG-4 object descriptor and the BIFS descriptor, and the MPEG4 object descriptor including information on correlation between video and link structural information and includes information required for three-dimensional video while maintaining compatibility with a conventional object descriptor”. Since, the information on correlation between video and link structural information needs to have in the decoding side of the system, it would have been obvious to include information required for three-dimensional video while maintaining compatibility with a conventional object descriptor.

Regarding to claims 5-6: The additional features of claims 5 and 6 relate to user interaction are disclosed by Yun et al [0077-0084], D2 (title); D3 (Fig. 1).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Kim et al (US 7,302,464 B2) discloses user request processing method and apparatus using upstream channel in interactive multimedia contents service.

b. Rajan (US 2001/0000962 A1) discloses terminal for composing and presenting MPEG-4 video programs.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T. Diep whose telephone number is 571-272-7328. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ustaris Joseph can be reached on 571-272-7383. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2483

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nhon T Diep/
Primary Examiner, Art Unit 2483

.